

**OPA1(form S1) Antibody (C-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP20727c****Specification**

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**OPA1(form S1) Antibody (C-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">O60313</a>
Other Accession	<a href="#">Q2TA68</a> , <a href="#">P58281</a> , <a href="#">Q5U3A7</a> , <a href="#">Q5F499</a>
Reactivity	Human, Mouse, Rat
Predicted	Chicken, Zebrafish
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	111631

**OPA1(form S1) Antibody (C-term) - Additional Information****Gene ID** 4976**Other Names**

Dynamin-like 120 kDa protein, mitochondrial, Optic atrophy protein 1, Dynamin-like 120 kDa protein, form S1, OPA1, KIAA0567

**Target/Specificity**

This OPA1(form S1) antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 895-929 amino acids from the C-terminal region of human OPA1(form S1).

**Dilution**

WB~~1:1000

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

OPA1(form S1) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**OPA1(form S1) Antibody (C-term) - Protein Information****Name** OPA1

**Function** Dynamin-related GTPase that is essential for normal mitochondrial morphology by regulating the equilibrium between mitochondrial fusion and mitochondrial fission (PubMed:[16778770](#), PubMed:[17709429](#), PubMed:[20185555](#), PubMed:[24616225](#), PubMed:[28746876](#)). Coexpression of isoform 1 with shorter alternative products is required for optimal activity in promoting mitochondrial fusion (PubMed:[17709429](#)). Binds lipid membranes enriched in negatively charged phospholipids, such as cardiolipin, and promotes membrane tubulation (PubMed:[20185555](#)). The intrinsic GTPase activity is low, and is strongly increased by interaction with lipid membranes (PubMed:[20185555](#)). Plays a role in remodeling cristae and the release of cytochrome c during apoptosis (By similarity). Proteolytic processing in response to intrinsic apoptotic signals may lead to disassembly of OPA1 oligomers and release of the caspase activator cytochrome C (CYCS) into the mitochondrial intermembrane space (By similarity). Plays a role in mitochondrial genome maintenance (PubMed:[20974897](#), PubMed:[18158317](#)).

#### **Cellular Location**

Mitochondrion inner membrane; Single-pass membrane protein. Mitochondrion intermembrane space {ECO:0000250|UniProtKB:P58281}. Mitochondrion membrane. Note=Detected at contact sites between endoplasmic reticulum and mitochondrion membranes

#### **Tissue Location**

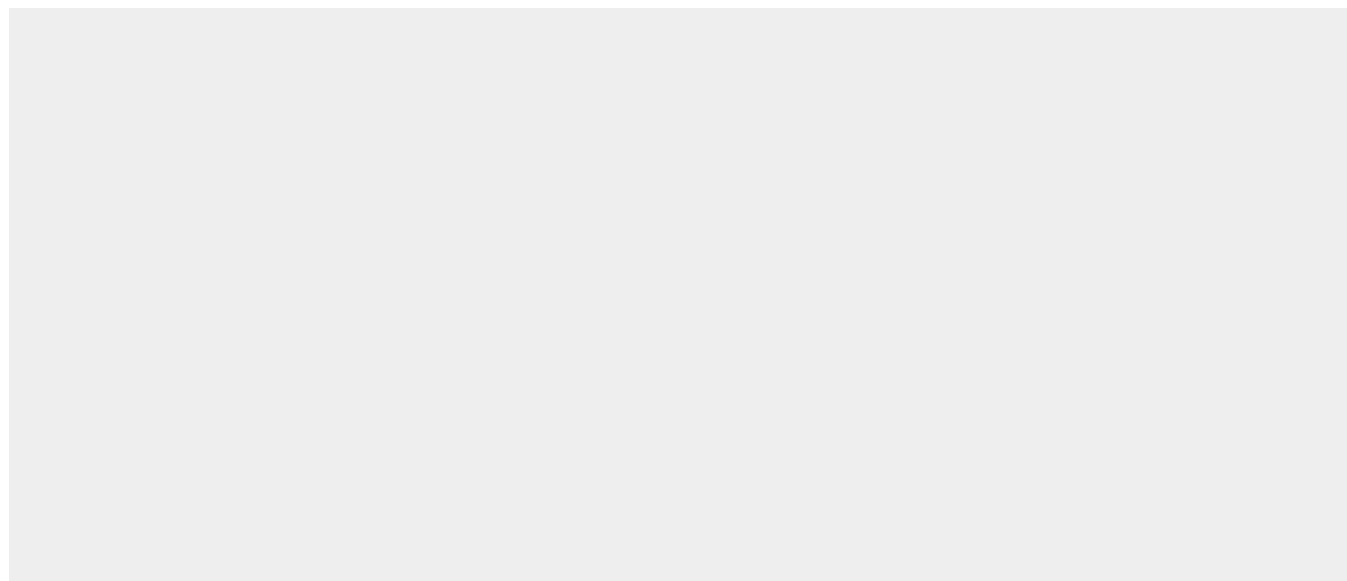
Highly expressed in retina. Also expressed in brain, testis, heart and skeletal muscle. Isoform 1 expressed in retina, skeletal muscle, heart, lung, ovary, colon, thyroid gland, leukocytes and fetal brain. Isoform 2 expressed in colon, liver, kidney, thyroid gland and leukocytes. Low levels of all isoforms expressed in a variety of tissues.

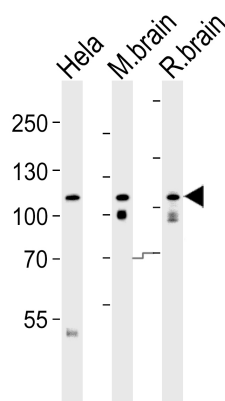
### **OPA1(form S1) Antibody (C-term) - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **OPA1(form S1) Antibody (C-term) - Images**





Western blot analysis of lysates from HeLa cell line, mouse brain and rat brain tissue lysate (from left to right), using OPA1(form S1) Antibody (C-term)(Cat. #AP20727c). AP20727c was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysates at 35ug per lane.

#### **OPA1(form S1) Antibody (C-term) - Background**

Dynamin-related GTPase required for mitochondrial fusion and regulation of apoptosis. May form a diffusion barrier for proteins stored in mitochondrial cristae. Proteolytic processing in response to intrinsic apoptotic signals may lead to disassembly of OPA1 oligomers and release of the caspase activator cytochrome C (CYCS) into the mitochondrial intermembrane space.

#### **OPA1(form S1) Antibody (C-term) - References**

Nagase T., et al. DNA Res. 5:31-39(1998).  
Wang W., et al. Nucleic Acids Res. 39:44-58(2011).  
Muzny D.M., et al. Nature 440:1194-1198(2006).  
Mural R.J., et al. Submitted (SEP-2005) to the EMBL/GenBank/DBJ databases.  
Delettre C., et al. Hum. Genet. 109:584-591(2001).

#### **OPA1(form S1) Antibody (C-term) - Citations**

- [Mitochondrial transplantation reduces lower limb ischemia-reperfusion injury by increasing skeletal muscle energy and adipocyte browning](#)
- [MCCC2 is a novel mediator between mitochondria and telomere and functions as an oncogene in colorectal cancer](#)